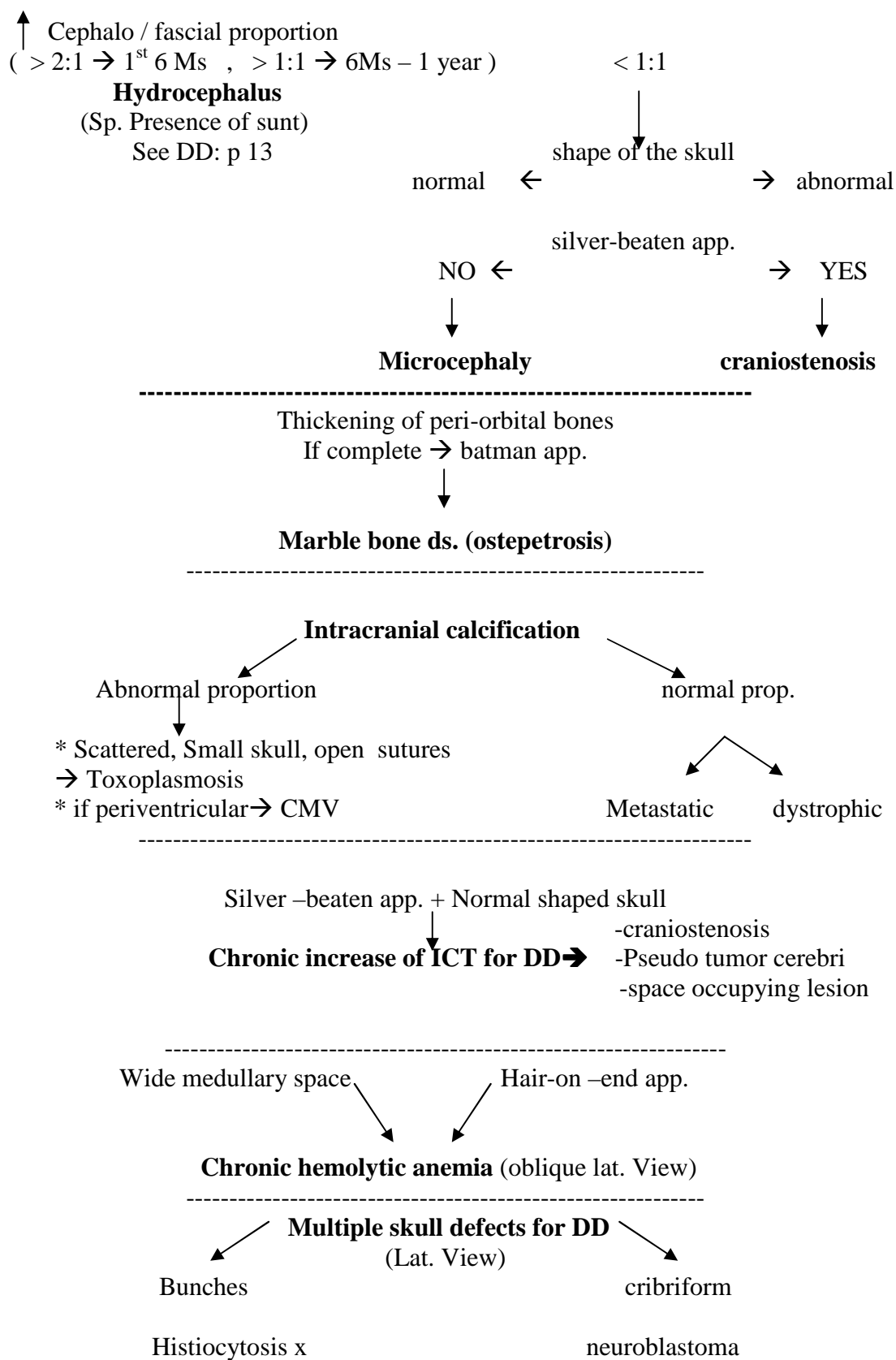
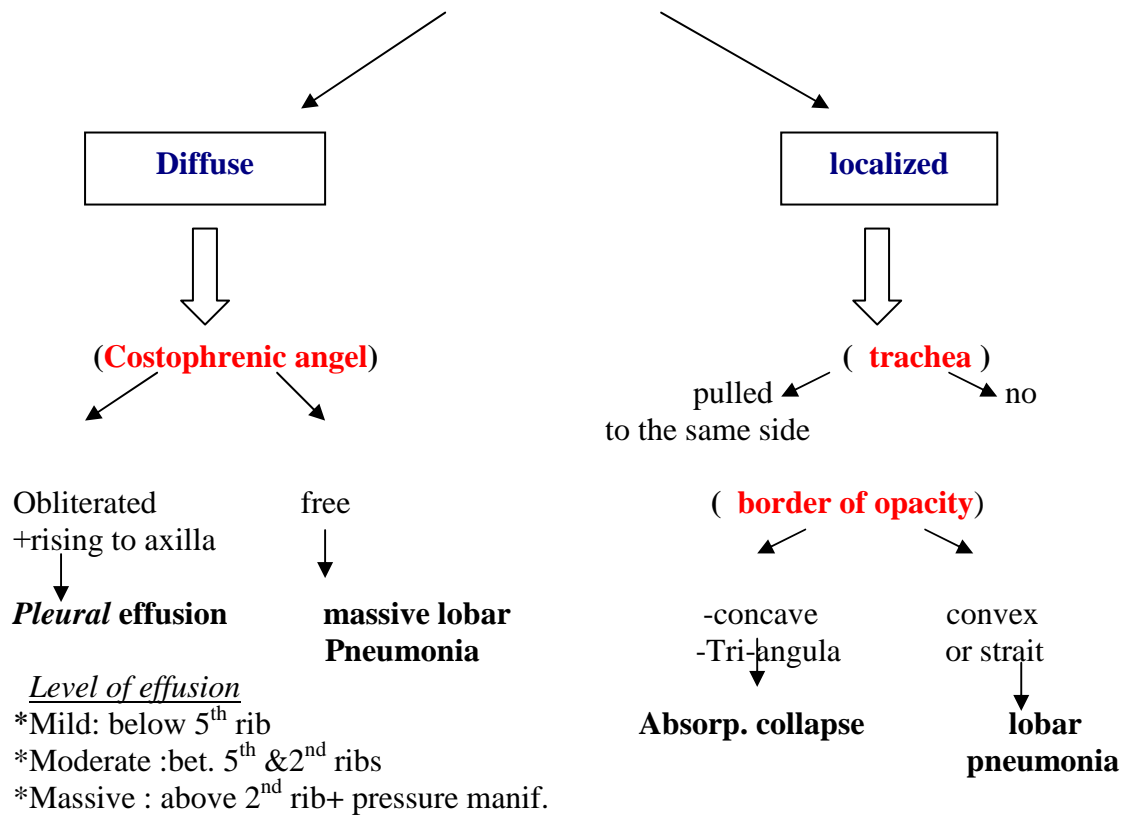
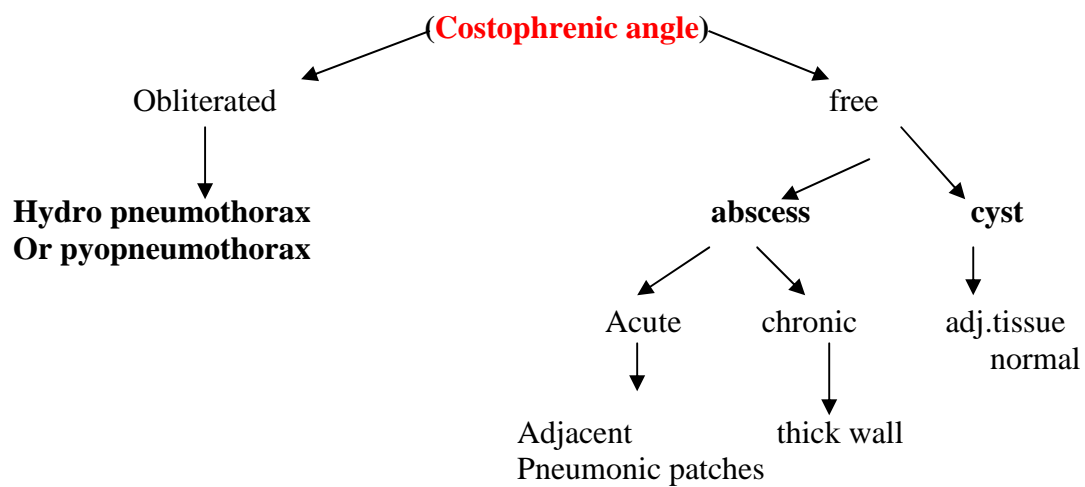


## Skull x-rays 😊

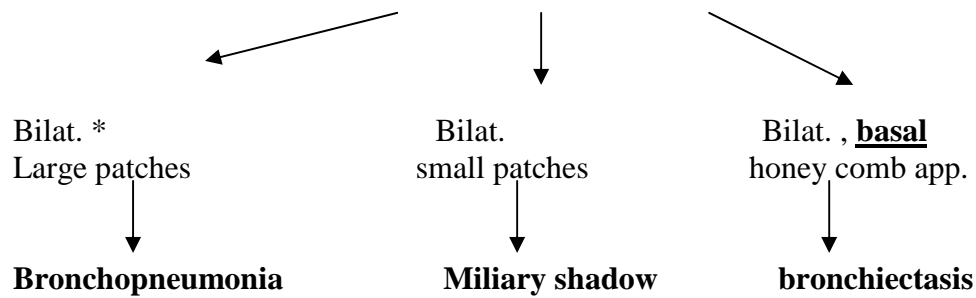
### LARG SKULL

### SMALL SKULL



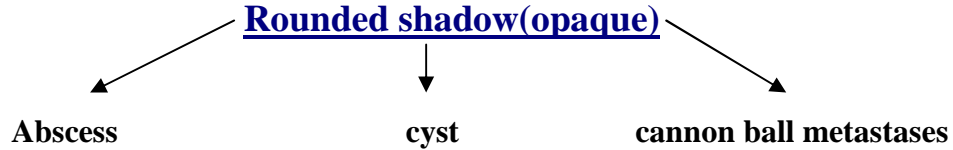
Chest x-rays1-OpacityHomogenous opacityAir & fluid level

### Heterogenous opacity



\* **N.B:** unilat. Opacity , affected all lobes → **staph. bronchopneumonia**

### Rounded shadow(opaque)



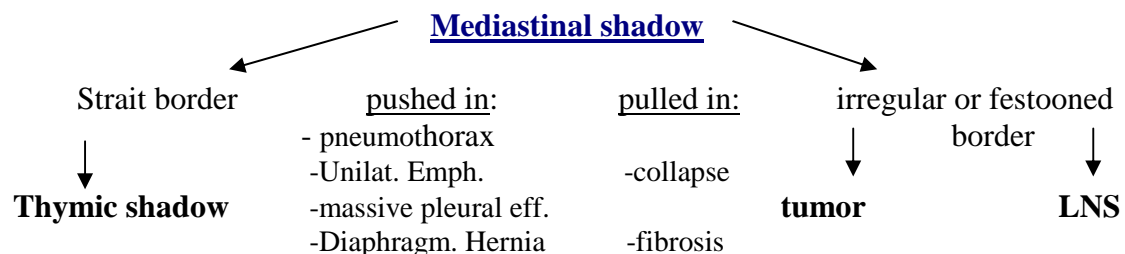
**\*If** one rounded shadow  
Unilat. (RT)  
Lower lobe

Aspiration lung abscess

### Extensive pleural fibrosis (mostly T.B)

- heterogenous opacity
- Over crowded ribs
- Tenting of diaphragm
- Entrapment of the heart
- pulled mediastinum

### Mediastinal shadow



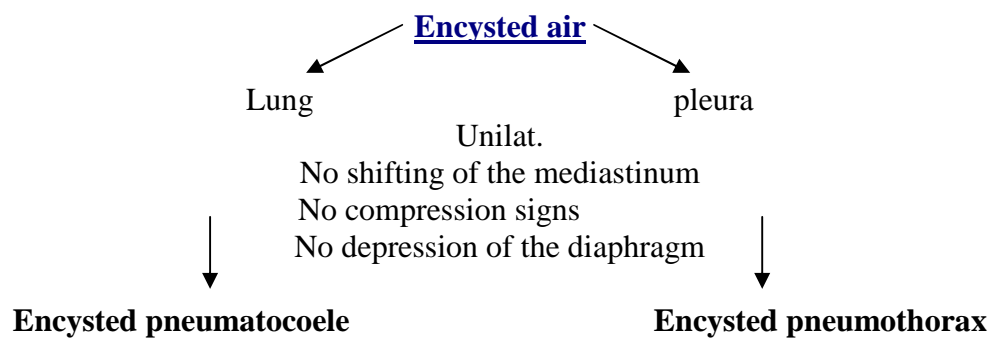
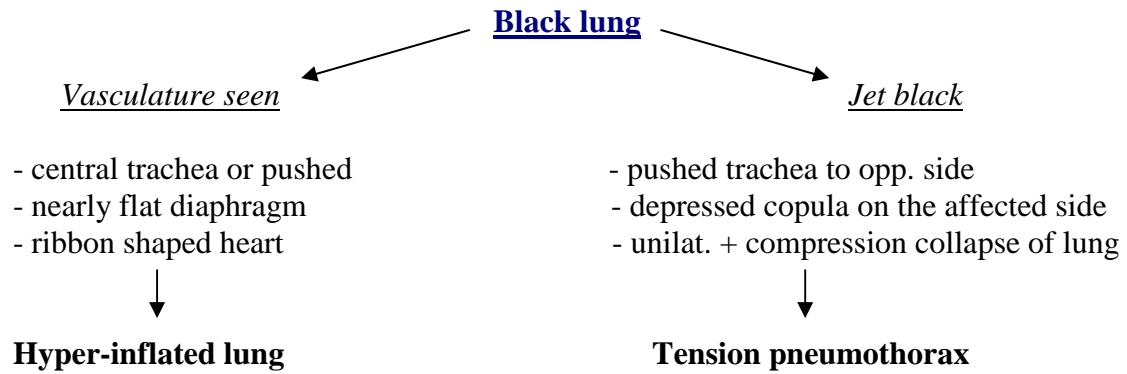
### Lung vasculature

If seen in middle & outer zones

Lower lobes only  
↓  
**Congestion**

upper & lower lobes equally  
↓  
**plethora**

If seen only in zone 1 only → **oligemia**



---

### **Diaphragmatic paralysis**

Abnormal site of copula (seesaw sign)  
NO tenting      NO hernia

---

### **Hyaline membrane ds.**

لا تستطيع تحديد ال heart من ال chest  
Or  
Ground glass app.

## Cardiac x-rays 😊

### Cardiac shadow information:

- 1- size of the heart (cardiomegaly +/-)
  - 2- position of the heart (apex rt. Or lt.)
  - 3- which chamber enlargement.
  - 4- lung vasculature.
- 

### Important points of cardiac x-ray:

\* **increase cardiothoracic ratio** ( > 56%)

→ **cardiomegaly for DD:**

- Cong. Heart ds.
  - cardiomyopathy
  - mild/moderate pericardial effusion
  - rheumatic heart ds.
- 

### \*\* **APEX**

a- site:

RT. Apex → look for liver shadow & gastric air bubble

**Dextrocardia**

Isolated dextrocardia

situs inversus totalis

b- position :

shifted outward



**RT. Ventricle**

shifted out & downward



(Cardiophrenic angle)

Obtuse



**LT. Ventricle++**

acute



**biventricular++**

---

### \*\*\* **chamber enlargement**

- 1- prominent aortic knuckle >.5 cm (LT. side)
  - 2- prominent pulmonary knuckle >1cm (LT. side)
  - 3- LT. atrial enlargement:  
( > 1.5cm , Loss of cardiac waist , strait lt. border) → **Mitralization**
  - 4- RT vent. ++
  - 5- LT vent. ++
  - 6- Bivent. ++
- } see → apex
- 7- RT. Atrial dilatation: ↑
- Opacity of lower 1/3 of rt. Border.

## **Fallot's tetralogy**

*(Coeur-en-sabot)*

- no or mild cardiomegaly
- lung oligemia (give false impression of hypertranslucency)
- Exaggerated waist

---

## **Massive pericardial effusion**

*(flask shaped heart)*

- well demarcated border
- huge cardiomegaly
- nearly centralized heart
- acute cardio-phrenic angels

---

## **T.G.A**

*(Egg-on-side app.) or (global shaped)*

- Marked bulge of RT. Cardiac border (RT. Atrial++)
- Exaggerated bronchovascular markings (lung plethora)

---

## **Oblique lat. View**

*(barium swallow)*

**RT. Vent. ++**



Obliteration of retrosternal space

**LT. Atrial ++**

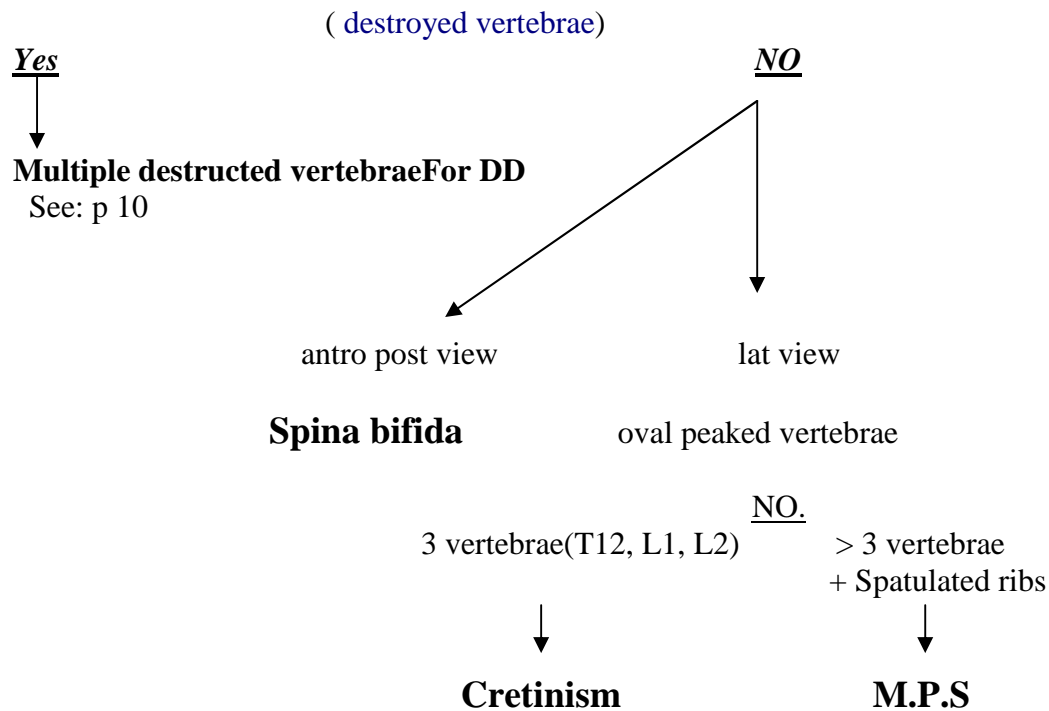


compression or indentation of the esophagus  
in retro cardiac space

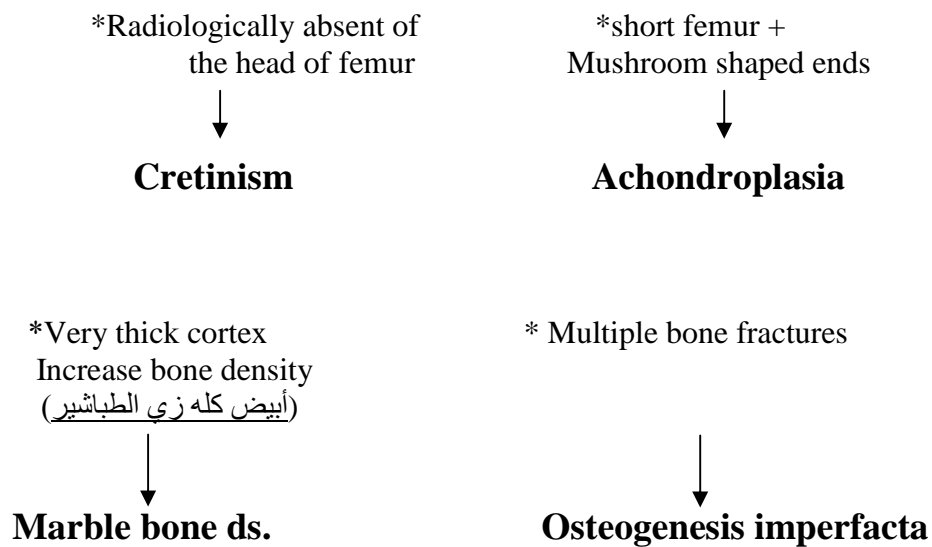
## Bones x-rays 😊

### 1- vertebrae

Anteropost. View or lateral view



### 2- Long bones



### 3-Rickets x- rays

(Upper limbs or Lower limbs)

#### **Active rickets**



- Cupping
- Broadening
- Fraying

#### **healing rickets**



- cupping
- broadening
- white line of calcification

#### **healed rickets**



- no cupping
- no broadening
- thick white line of calcif.

### **NB:**

\* If fraying is present together with the white line of calcif. →

#### **Active to healing rickets**

\* In active & healing rickets see :

- bone density (osteopenia )
- green stick fracture
- double peri-osteal line
- osteitis fibrosa cystica (present or no)
- deformities: genu valgus or genu varus.

\* If x-ray → upper limb → examine the bone age via carpal bones :-

- no carpal bones → age < 6 months ( congenital rickets)
- 1 bone → 1<sup>st</sup> 6 months
- 2 bones → 2<sup>nd</sup> 6 months , then one bone / year
- 7 → 6 years
- 8 → 12 years

### 4-x-rays of hands

1-

amalgamated carpal bone



**juvenile rheumatoid arthritis**

2-

- discrete metacarbals
- thine cortex, wide medulla
- mosaic pattern



**chronic hemolytic anemia**



## Abdomen x-ray ☺

### GIT x-rays

Plain x-ray

x-ray with contrast  
(Barium studies)

#### \* Plain x-ray:

*Intestinal obstruction*

*Imperforated anus*

*Diaphragmatic hernia*

Abdominal distension  
+ multiple fluid levels

inverted baby  
+ coin shadow at  
anal orifice

gas filled loops in chest  
+ shift of the  
mediastinum

#### \*\*x-ray with contrast ( barium studies )

B. swallow  
(Esophageal lesion)

B. meal  
(stomach)

B. enema  
(colon)

*1-Cardiac achalasia*

*cong. Hypertrophic pyloric  
stenosis*

*mega colon*  
for DD:

-Dilated esoph.  
-Single stricture  
on the lower end of esoph.  
(parrot peak app.)

3 types  
- complete obst.(blind end)  
- Ring obst. (umbrella sign)  
- segment obst. (rat tail, string sign)

-Stenosed distal seg. Of colon  
- Dilated seg. Proximal to stenosis

DD:

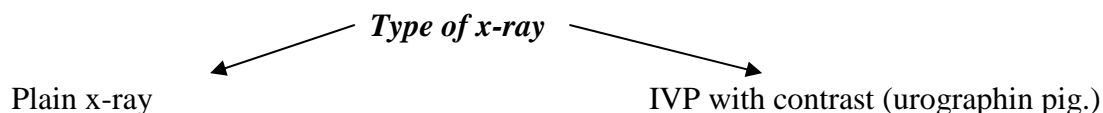
-cong. Mega colon  
- chronic constipation  
- anal stenosis  
- anal fissure

### 2- post-corrosive esoph. Stricture

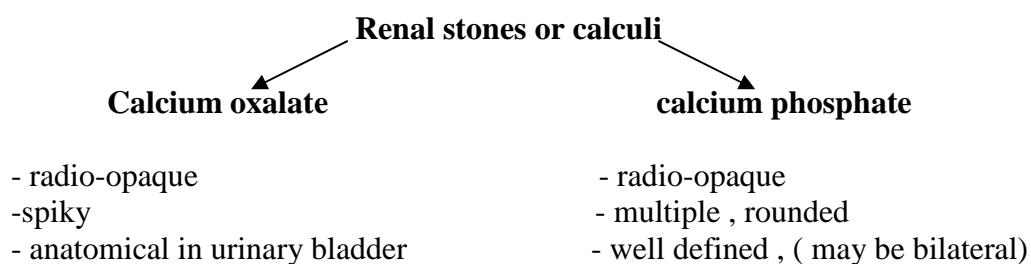
- multiple strictures  
- dilated esoph. above stricture

## Urinary system x-rays 😊

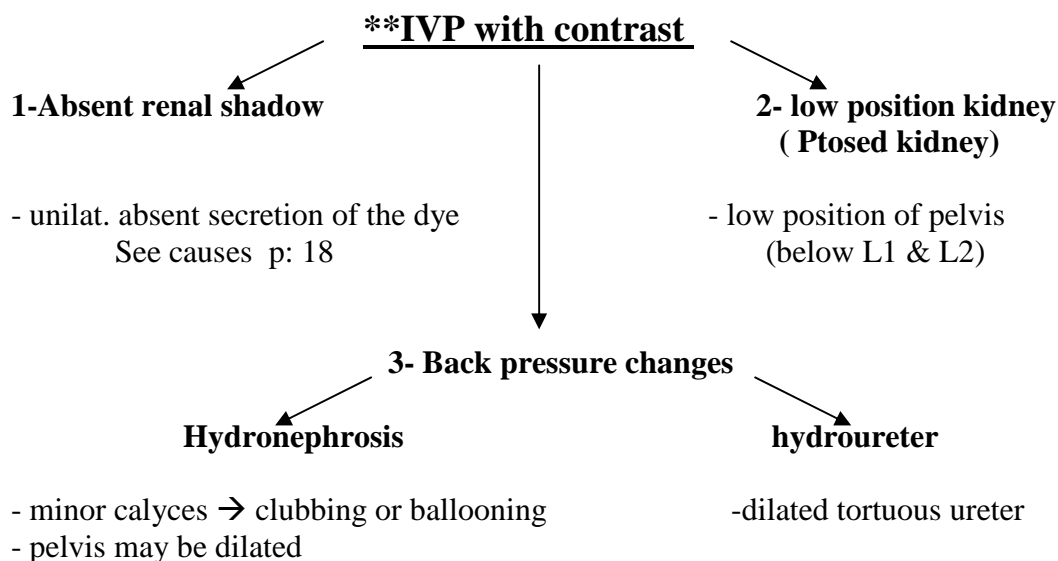
***Don't forget examine the skeletal system first looking for bone defects  
(e.g spina bifida or cretinism)***



### **\* Plain x-ray**



**NB:** one stone on RT. Side → renal stone or gall stone  
 To diff. →→ sonar or (lat. View; ant.-→gall st. , post. → renal st.)



### **\* site of obstruction \***

- \* dilated calyces & pelvis with no visualized ureter → **Pelvi-ureteric junction obst.**
- \* // // // & upper part of ureter → **ureteric obst.**
- \* // // // & ureters on both sides & distended bladder →  
**bladder neck or urethral obst.**

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 الحمد لله الذي هدانا لهذا ، و ما كنا لنهتدي لولا أن هدانا الله